

WHAT IS CLAIMED IS:

1. A guard for use in human spinal surgery, comprising:
a body having a leading end and opposite a trailing end, said body having a first portion and a second portion in pivotal relationship to one another between an open position and a closed position, said first and second portions having at least in part opposed interior arcuate portions, respectively, said first and second portions defining an opening for providing protected access to adjacent vertebral bodies and a disc space therebetween, said opposed interior arcuate portions of said first and second portions of said body being parallel to one another when said body is in the closed position, said opposed interior arcuate portions of said first and second portions of said body being angled to one another when said body is in the open position, said opening defined by said first and second portions of said body being generally circular when said body is in the closed position, said opposed interior arcuate portions being adapted to guide there through a surgical instrument, said body having an exterior surface that has opposed upper and lower surfaces oriented toward the adjacent vertebral bodies, respectively, said upper and lower surfaces being at least in part arcuate, said exterior surface of said body having opposed side surfaces, said side surfaces being at least in part arcuate, said first and second portions of said body when in the closed position forming a tube.
2. The guard of claim 1, wherein said opening defined by said first and second portions of said body is generally oval when in the open position.
3. The guard of claim 1, wherein said opening defined by said first and second portions of said body is generally elliptical when in the open position.
4. The guard of claim 1, wherein at least a portion of said upper and lower surfaces of said exterior surface are parallel to one another when said body is in the closed position.

5. The guard of claim 1, wherein at least a portion of said upper and lower surfaces of said exterior surface are angled to one another when said body is in the open position.
6. The guard of claim 1, wherein said side surfaces of said exterior surface are parallel to one another.
7. The guard of claim 1, wherein said body has an exterior surface that has a generally circular cross section along at least a portion of the length of said body when in the closed position.
8. The guard of claim 1, wherein said body has an exterior surface that has a generally oval cross section along at least a portion of the length of said body when in the open position.
9. The guard of claim 1, wherein said body has an exterior surface that has a generally elliptical cross section along at least a portion of the length of said body when in the open position.
10. The guard of claim 1, wherein said first and second portions of said body cooperatively engage each other along the length of the body when in the closed position.
11. The guard of claim 1, wherein said first and second portions of said body are hinged to one another to rotatably articulate relative to one another.
12. The guard of claim 1, wherein said first and second portions of said body rotatably articulate relative to one another about an axis of rotation that is fixed relative to the mid-longitudinal axis of said guard when moved bewteen the closed position and the open position.
13. The guard of claim 1, further comprising a lock adapted to cooperatively engage said body of said guard when said body is in the closed position to hold said body in the closed position.
14. The guard of claim 13, wherein said lock is a collar adapted to cooperatively engage said body of said guard when said body is in the closed position to hold said body in the closed position.
15. The guard of claim 1, wherein said body has a height in the range of 8-25 mm.

16. The guard of claim 1, wherein said opening defined by said first and second portions of said body has a height in the range of 8-20 mm.
17. The guard of claim 1, in combination with a bone removal device for forming through said guard an implantation space across the disc space.
18. The guard of claim 17, wherein said bone removal device is selected from the group consisting of a drill, a trephine, a reamer, an end mill, a chisel, and a burr.
19. The guard of claim 17, wherein said bone removal device has a height in the range of 8-20 mm.
20. The guard of claim 1, in combination with an implant driver sized in part for passage through said opening for passing an implant through said guard and into the disc space.
21. The guard of claim 1, in combination with a spinal implant adapted to be inserted into the implantation space formed through said guard.
22. The guard of claim 21, wherein said implant comprises at least one of bone and a bone growth promoting material.
23. The guard of claim 22, wherein said bone growth promoting material is selected from one of bone, bone derived products, demineralized bone matrix, ossifying proteins, bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
24. The guard of claim 21, wherein said implant is in combination with a bone growth promoting material.
25. The guard of claim 24, wherein said bone growth promoting material is selected from one of bone, bone derived products, demineralized bone matrix, ossifying proteins bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
26. The guard of claim 21, wherein said implant comprises at least one of the following materials: metal, titanium, plastic, and ceramic appropriate for implantation in the human body.
27. The guard of claim 17, wherein said implant is at least in part resorbable.
28. The guard of claim 21, wherein said implant is formed of a porous material.

29. The guard of claim 21, in combination with a chemical substance adapted to inhibit scar formation.
30. The guard of claim 21, in combination with an antimicrobial material.
31. A method for inserting a spinal implant having at least in part upper and lower arcuate portions at least in part within and across the generally restored height of a disc space between two adjacent vertebral bodies of a human spine, the method comprising the steps of:
 - contacting the adjacent vertebral bodies with a guard having a body with a distal end for bearing against the adjacent vertebral bodies, the guard having a first portion oriented toward one of the adjacent vertebral bodies and a second portion oriented toward another of the adjacent vertebral bodies, the first and second portions being rotatably articulating relative to one another to move between an open position and a closed position;
 - rotatably articulating the guard to move the body between the closed and open positions;
 - forming, through the guard, an implantation space having opposed arcuate portions across the height of the disc space and into at least a portion of the endplates of the adjacent vertebral bodies; and
 - inserting the implant through the guard and into the implantation space.
32. The method of claim 31, further comprising the steps of performing the procedure on both sides of the spinal midline of the spine and inserting two implants into the spine, each of the implants having a width less than half the width of the disc space.
33. The method of claim 31, wherein the method is performed without removing the guard between the contacting step and the inserting step.
34. The method of claim 31, further comprising the step of securing the body of the guard in one of the closed position and the open position.
35. The method of claim 31, wherein the forming step includes the step of forming the implantation space with a bone removal device.
36. The method of claim 31, wherein the step of forming includes the step of inserting a bone removal device through the guard to a desired depth.

37. The method of claim 36, wherein the forming step includes one of the steps of milling, drilling, reaming, and trephining the implantation space.
38. The method of claim 31, wherein the forming step includes the step of forming opposed receiving surfaces in the end plates of the vertebral bodies corresponding at least in part to the size, shape, and contour to an implant to be implanted.
39. The method of claim 31, wherein the step of inserting the implant includes the step of using an implant inserter to insert the implant through the guard and into the implantation space.
40. The method of claim 31, wherein the inserting step includes the step of inserting an implant that is a bone graft.
41. The method of claim 31, further comprising the step of loading the implant with fusion promoting substance.
42. The method of claim 41, wherein the loading step includes loading the implant with the fusion promoting substance being selected from one of bone, bone derived products, demineralized bone matrix, ossifying proteins, bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
43. The method of claim 31, further comprising the step of treating the implant with a fusion promoting substance.
44. The method of claim 31, wherein the implant is in combination with a chemical substance adapted to inhibit scar formation.
45. The method of claim 31, wherein the implant is in combination with an antimicrobial material.
46. The method of claim 31, wherein the inserting step includes inserting an implant comprising a fusion promoting substance.
47. The method of claim 31, wherein the inserting step includes inserting an implant comprising a bone ingrowth surface.
48. The method of claim 31, wherein the inserting step includes the step of inserting an implant comprised at least in part of one of bone and bone growth promoting material.

49. The method of claim 31, wherein the implant is in combination with at least one of a fusion promoting substance, bone, bone growth promoting material, bone derived products, demineralized bone matrix, ossifying proteins, bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
50. The method of claim 31, further comprising the step of visualizing at least a portion of the spine through the guard.
51. The method of claim 31, further comprising the step of illuminating the guard and at least a portion of the spine.